Medical Library
WO. 5
N56
v.8 no.1

SECOND SERIES VOL. VIII, No. 1

# BULLETIN

## OF

# THE NEW YORK ACADEMY OF MEDICINE

## JANUARY, 1932

PUBLISHED MONTHLY BY

THE NEW YORK ACADEMY OF MEDICINE
Fifth Avenue and 103rd Street
New York, N. Y.

Entered as second-class matter, February 3, 1928,
at the Post Office at New York, N. Y., under the Act of August 24, 1912.
Subscription $2.00 per year. Single copies, 25 cents.

## CONTENTS

*Anniversary Discourse*:

The University and the Medical Profession, James Ewing 1

Pure Air and Clean Streets Exhibit ..... 34

Recent Accessions to the Library ..... 36

Proceedings of Academy Meetings ..... 40

Fellows Elected January 7, 1932 ..... 45

Deaths of Fellows of the Academy ..... 46

Hosp. Lib
Gift
Dr. Samuel W. Famulener
11-20-1933
v.8

BULLETIN OF
THE NEW YORK
ACADEMY OF MEDICINE

VOL. VIII JANUARY, 1932 No. 1

# *ANNIVERSARY DISCOURSE*

## THE UNIVERSITY AND THE MEDICAL PROFESSION*

JAMES EWING

Professor of Pathology, Cornell University Medical College

The University has always been the best expression of the intelligence of a community. The remarkable achievements of ancient peoples indicate that they enjoyed some of the advantages of the University idea long before any formal organization existed. Ancient Greece, in the time of Pericles, 460-136 B. C. produced the most remarkable galaxy of great names of any age in history. Plato, Socrates, Aristotle, Hippocrates frequented the Academy at Athens as individuals and taught whom and what they chose. Modern educators who are concerned about developing the best product may well ponder the fact that Greece accomplished her results without complex organization or great material resources, but certainly not without method.

Since there were no books and few parchment scrolls, the method involved disputations, lectures, and close personal contacts. They developed to the highest degree the spoken word, so that Greek became the most elegant and refined of all languages. We may well believe that the Greek scholars became most impressive personalities, able to sway their pupils by the force of logic and oratory and

*Delivered before The New York Academy of Medicine, November 5, 1931.

HCTB
8-4-36

probably also by nobility of character. It is very important to note that Medicine occupied a very high, possibly the highest position in the learning of that early day. The writings of Hippocrates stand as scholarly productions even today, and represent an enormous labor guided by high intelligence. Yet, his greatest contribution was the code of morals, necessarily reflecting the general standards of the time, and still, after 2,400 years, testing the moral capacity of present day physicians. We must confess that the ancient Greeks conceived the University idea in its simplest and most effective form. They relied upon individuality, simplicity, and refinement of thought and speech. They were also good observers, for Aristotle gave to Medicine the beginnings of comparative anatomy, botany, zoology, embryology, and physiology, and Garrison regards him as the greatest biologist of antiquity with an influence extending down to modern times.

It has been said that the first essential of a University is a great library. Some would place the first real University at Alexandria where Greek culture was grafted upon an ancient civilization and where a great library and storehouse of knowledge was accumulated. It is true that the Alexandrians especially Herophilus and Erisistratus, anatomist and physiologist, carried Medicine further than the Greeks, but the inspiration was still mainly Grecian. Those who wish may attribute this success to the great library.

The austere Romans long rejected Greek medicine because of its dogmas, empiricism, and commercialism, but after the destruction of Corinth B. C. 124, it was introduced into Rome mainly through the influence of Asclepiades. He was a strong personality, but, as a scientist, he was less sound than Hippocrates. In the early Roman Empire, it is difficult to find any evidence of full appreciation of the University idea, although medicine, hygiene, and sanitary engineering became prominent interests of the State, and objects of patronage by the emperors. Men of learning seem to have wandered about as individ-

uals, attracting followers according to their personalities, memorizing the texts of ancient writers, disputing about theories, and indulging their own speculations without much reference to new facts.

Supported by a rich clientele, practical medicine, however seems to have developed to a rather high degree, and it is not improbable that in the Roman Empire the available knowledge of the day was as well applied to practical uses and abuses as it is today. Over two hundred surgical instruments were found at Pompeii.

Roman medicine produced many great scholars, generally under the patronage of the emperors, but apparently not aided by University ideals or organization. Celsus was a rich Roman gentleman in the time of Tiberius, a polished writer, a student of medical history, a rather astute medical philosopher who compiled or translated treatises on nearly every department of medicine, which remained standard for centuries and were eventually printed in 1468. He was a modern Hippocrates. Dioscorides, an army physician under Nero (54-68 A. D.), was virtually the originator of materia medica, describing several hundred vegetable plants and principles. His work remained the chief source of information until the 17th century. Soranus of Ephesus, in the 2nd Century, compiled a treatise on obstetrics, gynecology and pediatrics, to which no important additions were made until the time of Paré, 1500 years later.

Galen, 131-201 A. D. was undoubtedly the most influential character in ancient medicine. He was a highly talented, very industrious scientific adventurer, who wrote enormous treatises on every department of medicine. He was first an aggressive, self-confident, and highly successful practitioner. His great power lay in his remarkable studies and demonstrations in experimental physiology of the nervous and vascular systems in which he made important original contributions. By indefatigable industry he produced an encyclopedia of medicine in which fact

and fancy were so cleverly intermingled that the work became the authoritative medical gospel and so remained for a thousand years. His theorizing was almost wholly immature and unsound, utterly unwarranted by the available knowledge and strictly designed to maintain the teleological idea of natural processes. His career is the outstanding example in the history of science that man is, on the whole, a poor thinker, but a marvellous doer. Who can say whether medicine would have done better if Galen had never lived?

Finally, in the Roman Empire it should be noted Medicine became of vast importance in the social life. Practitioners were numerous, specialists of all sorts abounded, medical cults flourished; sorcerers, poisoners, charlatans of every type mingled without restraint of law, with reputable physicians. Disease was excessively common, and the State, apparently despairing of any great aid from curative medicine, devoted itself with astonishing success to personal hygiene and to public works calling for the highest degree of skill in sanitary engineering. And thus Roman medicine continued for about 500 years, until advancing physical and moral decay led to the disintegration of the Empire.

To the student of the university idea, the history of Roman Medicine offers many lessons of importance. Although the Romans had a genius for organization and the making of laws they did not apply this genius to Medicine. They got along 600 years without doctors and after the introduction of Greek medicine they continued 500 years more without any real conception of the university idea. Individual talent was abundant enough, but the conception that systematic coöperative intelligence properly organized and directed to the collection, spread, and increase of knowledge was a necessary feature of a stable civilization seemed not to enter their heads. Schools of some sorts and opportunities for acquiring medical and other knowledge must have existed, but the teaching of science was mainly practical and under the apprentice-

ship system. We know of no great collections of scholars, libraries, or students such as existed at Athens, Alexandria, and Ephesus. The great Roman physicians seem to have lacked the moral fibre of the Greeks. It is easy to see how the rare and expensive parchments executed by hand with extreme care became very precious documents, which were available to the select few. So the Canons of Hippocrates, Galen and Avicenna became the gospels of medicine, and the scholar's position depended largely upon the extent of his familiarity with these gospels, and his ability to maintain any thesis by quotations from these and other reputed writings. The Romans studied mainly books, not Nature.

With the breaking up of the Western Empire conditions completely changed for the worse. The destructive invasions from the North removed most vestiges of organized medical science and practice, and science and learning took refuge in the Church, where they remained for over 600 years. The monks did not do any too well with their responsibilities, owing partly to chaotic political conditions, but they preserved and cherished the Greco-Roman parchments and they devoted themselves seriously to the care of the sick. In 480-544 A. D. they founded the Benedictine Order devoted mainly to medical interests and nursing. They Latinized medical writings and civilized to some extent the northern invaders. Monastic medicine was probably about as good as conditions permitted. Yet in the cloisters with attached hospitals there were excellent opportunities for original thought and observation, and even for university coöperation, of which this entire era produced nothing. Instead, the amazing history of science in the Dark Ages was a vast experiment revealing the baleful influence of the worship of authority and the pursuit of scholasticism. Nearly all the influences were antagonistic to the university spirit.

But original thought was not dead. It had survived best under Moslem influence, and in 1020-84 A. D. it led suddenly to the foundation of a vigorous school of medi-

cine at Salerno. Here, under Constantine, a native of Carthage, gathered a group of scholars, who pursued with original freshness, anatomy, physiology, internal medicine, surgery, and with the aid of women, obstetrics and nursing. They produced a great encyclopedia of medicine, written by many authors, the Summa medicinalis of Salerno, which became the standard text-book for a century or more.

The foundation of the mediæval universities followed rapidly after the example of Salerno, at Paris, 1140; Bologna, 1158; Oxford, 1167. The beginnings of some of these schools were probably laid much earlier for Oxford ventured to celebrate its 1000th anniversary in 1872. Within a period of 200 years substantial university organizations were built up over the whole of Europe from Scotland to Bagdad. At first the main objects pursued were medical, but very soon, law, philosophy, theology, and the natural sciences became almost equally prominent. At this critical period probably more than ever before, medicine revealed itself as the mother of the sciences, and the physician became recognized as a member of a learned profession.

The early recruits of medicine came largely from the monks and friars, but soon the dissemination of knowledge brought great numbers of students, especially at the larger universities. Under the influence of christianity, the growth of hospitals, which had survived the decay of the Dark Ages, became the most notable and effective department of medicine. Many orders of monks and knights devoted to the care of the sick, proved efficient agents in building hospitals, and at the same time in maintaining the close connection between Medicine and the Church.

It is interesting to consider the organization of some of the early universities. Some became largely ecclesiastical, as Paris, Oxford, Montpelier, and were governed by a corporation composed of students, and masters, under a chancellor, with the votes in the hands of the masters. Bologna,

Padua, Siena, were great law schools, the rector being elected by the students. Naples and Salamanca were State Universities, founded by a monarch, with papal recognition. The control of the universities was much more democratic than it is at the present time. Rigid standards of work were required of the students, and great formality surrounded the giving of degrees. In 1140 A. D. practitioners of medicine were required to secure a license from the university after examination. Erasmus was required to spend eighteen years at the University of Paris before he was allowed to preach a sermon. The influence of the old scholasticism was dominant and even intensified. The eyes of the State, the Church and the public were upon the activities of the universities, and the position of the scholar was rather enviable.

Yet, mediæval medicine had problems with which it was wholly incapable of dealing. Infectious diseases of all sorts ran unrestrained riot. Leprosy, tuberculosis and malignant syphilis were extremely common. Scurvy, rickets and ergotism were widely prevalent. Influenza, typhus, glanders and streptococcus infections maintained a continuously high incidence. In 1348 the Black Death, bubonic plague, swept over the entire western world, after devastating Asia, and caused the loss of about one-fourth of the entire population of Europe. Medicine survived these vast evidences of impotency, and it seems not impossible that thinking men began to realize that the old doctrines were unsound and inadequate, that scholasticism and philosophizing about disease must be replaced by more direct observation and study along entirely new lines. These significant changes actually occurred in the real revival of learning of the Renaissance.

The Renaissance, 1453-1600, was marked by the discovery of America, the circumnavigation of the globe, the new astronomy of Copernicus, the Reformation, and wide expansion of the field of learning with the foundation of many new universities. Not all of these events may be referred to the influence of the universities of the pre-

vious three centuries. There was a general rebellion against the dogmatism and scholasticism of the old schools. Most of the progress was made by the original thought of conspicuous individuals who came into violent conflict with established powers. In medicine there was an array of great names recalling the ancient Grecian period, Paracelsus (1493) reviled Galen and the medical gospels, and lectured from his own experience and experiments. Vesalius, 1514, despised Galen and established the modern conceptions of anatomy. Ambroise Paré, 1510, greatly advanced the theory and practice of surgery and obstetrics, and founded legal medicine. These men were far less polished scholars than their Greek prototypes, but they were nearer the practical truth and far more aggressive, risking their lives in attacks upon dogma and authority. Servetus was a modern Socrates, who was burned at the stake as a reward for his belief in the pulmonary circulation.

Improvements in medical teaching made slow progress. Medical practice certainly did not improve, but abounded in superstition and quackery. The plagues continued. Physicians were the butt of much ridicule. Throughout it all the medical universities showed little concern about their practical responsibilities. Most of the newly founded universities were devoted to other branches of learning. It would seem that during the Renaissance medicine lost something of its commanding position, for which its persistent worship of scholasticism must be blamed. It had little to offer in comparison with the great advances made in other fields.

The 17th century was again a period of individualism, resulting in many great discoveries, the circulation of the blood by Harvey, 1628; the microscope, used especially by Kircher in medical studies (1602); bacteria, by Leeuwenhoek, 1632; and the founding of histology, Malpighi, 1628. Sydenham stands out as a violent opponent of the new scholasticism and as a genius in refined clinical observation. He did more than any other physician of the century

to maintain the confidence of the public in the medical profession. Medical teaching became more concentrated in a few universities, and these fell into comparative disrepute for idle thinking and the pursuit of learning for its own sake. Many medical societies sprang up and took the lead in medical progress, as at Naples in 1560, and the Royal Society of London, 1660. The mortality from disease was as high or higher than in the Middle Ages. It was especially severe in child-birth and infancy. There was a sad discrepancy between the numbers of famous names and real discoveries in medicine and their practical application in the healing of the sick. For these conditions medicine was not entirely responsible. The main interest of the human race in these two centuries was not medicine, or science, but war, on an ever increasing scale, small and large. Human passion and greed vied with an evil nature in destroying human life, employing ferocious massacres, and continuous beheadings and burnings at the stake for trivial offences against established authority.

In the 18th century the picture changes for the better, owing to the influence of many notable scholars, the general advance in knowledge, and the improvement of public morals. Boerhaave at Leyden was a commanding figure in clinical medicine. Haller systematized physiology, Priestly discovered oxygen, the three Moores established the teaching of medicine at Edinburgh on an excellent plane, the Hunters advanced surgery at London, and Jenner introduced vaccination against smallpox. American medical teaching made its bow at Philadelphia in 1765. Yet, the average standard of medical practice was poor, and hospital conditions are said to have been the worst in history. Medical education was dominated by a few great personalities who were rather loosely connected with universities. In England many hospitals undertook to teach medicine as well as care for the sick, a policy which dominated British medicine for more than a century. It developed great clinical teachers, like Pott, Cullen, Monro, Hunter, but it was not well adapted to advance medical

science. With the current state of knowledge, it was probably the best line of progress, for medical science was marking time. It was certainly the most lucrative, for many of the practitioners of the day became wealthy and a few were philanthropic. As a phase of the prevailing caste system, the successful physician indulged in outlandish overdressing, cultivated a pompous manner and pursued social advancement. The social position of the doctor reached its highest point in history. A great army of quacks imitated the regular doctors and achieved almost equal or greater success. Here is the period where modern reformers may study the effect of material prosperity on the progress of medicine. Apparently it had no deleterious effect, and its vices were the result of the world wide adoption of the caste system. Probably the greatest scientific advance was made by Morgagni at Padua, who for the first time correlated clinical symptoms with pathological findings on a great scale, thus founding modern pathological anatomy. The great bulk of our present descriptive knowledge of clinical medicine was acquired in this period, legal medicine was founded in Germany, medical history was actively cultivated, many medical societies were founded, medical journals began to increase, and thus medical knowledge was widely extended and more influential. Yet university medical schools were not well organized, and theories of the nature of disease were fanciful. Even the use of Latin in medical teaching was not discarded until the middle of the century.

An interesting event in the history of medical education of this period was the reorganization of the Vienna school by Van Swieten. To the old group of quiescent scholars, dull Latin lecturers, in this faculty, this reform must have appeared as unwelcome. But Van Swieten was not a professional reformer, but an able teacher and investigator. He did not remove the whole Faculty by one stroke, but with the support of Maria Theresa he took several years to introduce new men and new methods, including clinical bedside teaching. It is particularly interesting to note

that the new men transplanted did not themselves become famous, but merely brought the school up to date. The real period of eminence of the Vienna school in pathological anatomy and clinical medicine did not come until seventy-five years later.

The period of Modern Medicine began toward the latter half of the 19th century, with the discovery of anæsthesia and antiseptic surgery, the establishment of Virchow's cellular pathology, and the beginning of the bacteriological era. Before these events there could be no sound conceptions of the nature of disease, curative medicine was under great handicaps, and preventive medicine worked in the dark. The cellular pathology was the natural fruit of the high development of pathological anatomy and histology to which many contributed. Bacteriology made rapid strides in the discovery of the bacterial causes of disease when the theories were established by Pasteur and the technical methods were devised by Koch. Chemistry, physics, and biology received great stimulus and sound direction from these great advances in medicine. Experimental methods were employed with new success in every branch of medical research. In a field thoroughly prepared by the elaborate descriptive clinical studies of the previous century, medical problems began to fall with amazing rapidity.

The ease with which the new methods revealed important new facts caused an enormous expansion in the scope of medical research. The completeness of the solution of many century old medical problems stirred the imagination of scientists in every direction, and led to rapid advances in all departments of science and to broad generalizations. It was an intoxicating period in the progress of knowledge. It may be presumed that these things occurred as they did because many lines of endeavor coincided, and the times were ripe. Yet, it is highly probable that a prime and essential factor was the improvement in the organization of universities which began early in the

previous century and made rapid progress as the political conditions of Europe improved.

The idea of coöperative intelligence in related branches of knowledge as represented in a great university was best conceived in Germany. The German universities grew steadily in size, quality of personnel, ideals, and material resources. They became the pride of the nation and especially of the cities, large or small, in which they were located. They also became fully recognized as the main bulwark of industry, art, and commercial advancement. The organizations were based upon a broad and sound philosophy. It is impossible to escape the conclusion that the progress of German science, especially of German medicine, was based mainly upon her great universities. The same movement in the organization of universities extended to other European countries, to France and England with somewhat greater individualism, and later to America and Japan. Today the University stands at the peak of its power in the favor of governments, and the estimation of the public, as the main source of human progress. The record of progress in medicine of the past century, which has been chiefly the product of the medical faculties of universities, is probably the chief reason why the university occupies its present fortunate position.

The foregoing review is not an attempt to sketch the history of medicine. It merely presents a few outstanding events of that long record to show the vicissitudes of the university idea in history; its first appearance in ancient Greece; its transfer to the Roman empire, to Egypt and Arabia; its disappearance from Europe in the Dark Ages; its survival in Arabia and Egypt; its sudden rebirth, almost like a biological mutation, in Salerno; its part in causing the revival of learning and the general Renaissance; its decline in the 16th and 17th centuries, and its second rebirth in the 19th century, leading to the amazingly rapid development of modern medicine. Rather than review further its most recent contributions, with which you are all familiar, it is proposed to inquire more

carefully what is a University, and what is the university idea.

## II

*The University Idea.*

The university idea involves the coöperative intellectual and moral effort to collect, disseminate and apply knowledge for man's needs.

Coöperation between the various branches of knowledge is perhaps the first essential of a university and becomes more necessary as the complexity of problems increases. Most of the great advances in medicine have resulted from the reflection of new knowledge in one science upon the problems of another. In order to have coöperation, the men in a university must have the social instinct and understand the significance of the social relation. Here, at the outset, is a very difficult and complex problem, how to secure voluntary united effort among scholars, without interfering with individual effort and ambition. It cannot be secured by mandate, but it may be conserved by deliberate efforts of university organizers. It must be based on mutual respect, character, and community interest. Experience shows that institutional pride, a sense of ownership in one's own products and partnership in the achievements of one's colleagues, all directed toward common ends, have been the most efficient factors in securing coöperation. A sense of loyalty and intellectual honesty belongs to coöperative scholarship. There are many instances where the influence of a commanding personality in a university, an intellectual or official leader, himself exemplifying the desired qualities, has secured the highest type of loyalty and efficiency. It has been said that every great institution is but the shadow of some man. It is the belief of many that in the choice of a university faculty, one will go further by choosing men rather than experts.

Thus, the very first problem of the university encounters that most fundamental question of morals. One must

therefore stress the moral aspect of university organization to the fullest limit. In the advance of knowledge, the end must not justify the means, for, if there are not moral standards in a university where are we to find them? The Church preaches them, the Law attempts to compel them, business often flouts them, but the public conscience expects the exhibition of them by men associated in a university. The moral law applies to the officers of a university quite as much as to the active workers. I doubt if any university can go far under the leadership of a man who has only a loose sense of right and wrong. One must practice the cardinal virtues before attempting to cultivate genius.

In order to preserve loyalty and morals in a university, the organization must be designed wisely for that purpose. The earliest schools solved the difficulty by having very little organization and that in the hands of students and teachers. It was an ideal method, and worked well, but is too cumbersome for modern conditions. Other schools were supported and directed partly by the state and some were chiefly products of the Church. History shows rather clearly that the church has never been very successful in conducting universities, especially medical schools. One may well wonder why the medicine of the monks was not more productive, since they should have been well provided with leisure, loyalty, and morals, but we have modern instances of failure by the church in the same field. In modern times the State has appeared at its best in university affairs, especially in Germany and France, by providing funds, and creating a group of experts in university organization, who generally wisely kept their hands off the internal workings of the university.

For many centuries and after many digressions, the opinion has strengthened that the essential policies of a university should be determined by the scholars themselves, or through their agents, while non-professional officers should deal only with finances. It is a question of deciding complex and technical matters by men who have first-

hand knowledge. The best results have followed this policy as with the great German universities of the last century.

When scholars have been chosen for personal and moral qualifications, it cannot fail to work well. If they are not so chosen, the whole structure must be faulty and no scheme of organization will correct the fault.

Combined direction by a body composed of laymen and scholars has long been active in the University of London, with excellent results, but the questions submitted to this body are of a general nature. This body actually inspects the workings of various medical schools under the University of London, and adjusts grants to the schools according to its best judgment, but for the past forty years it has taken no part in the choice of the faculty. There have been no conflicts in the working of this organization, and it is needless to say that the men composing the body possess high moral and personal qualities, and understand the university idea.

In America there is a notable lack of uniformity in the executive management of university medical schools and frequently a failure to recognize the best university standards. Experience shows that most of the minor and some major troubles arise just at this point, where in the interests of executive efficiency valuable traditions are neglected and an important source of loyalty is sacrificed. Owing to the executive indisposition of scholars, the president and his appointee, the dean, have sometimes been led to exercise plenary powers and even to assume professional and spiritual leadership. Under some conditions such expedients may have been necessary, yet an energetic president and an aggressive dean subordinating the faculty, are better suited to a business organization than to a university. The deanship implies maturity and the qualities of leadership and these are best judged by scholars in whose hands the nomination of dean should rest. A president possessing broad vision and a tactful dean

cordially coöperating with the faculty furnish ideal conditions, and unless these are fully met many believe that the office of the dean should be abolished and his executive function filled by a lay officer. The university idea is comparatively new to most American medical schools, while practical problems have been very numerous, and to these facts we may attribute our failure to reach a real university standard in organization.

Universities have traditions to which they cling tenaciously and which are often very valuable possessions, but may become serious handicaps. These traditions are the result of long experience and careful thought by leaders, past and present, and they generally dominate the organization and activities of the schools. They make character and quality in an institution. They enable the school to weather storms of criticism, and the assaults of reformers. They conserve the self-confidence and loyalty of the scholars and students, and they offer a splendid example of mental and moral equilibrium to other governmental and social institutions. They tell the iconoclast that there are immutable standards of right and wrong, that past progress is substantial and the future full of promise. Traditions are strongly entrenched in Germany, France and England, where they are hedged about by complex barriers, and it is so difficult to change them that few attempts are made to do so. Rigid adherence to theory and prominence of clinical study are characteristic of French schools, thoroughness and originality of the Germans, and solidity and critical ability of the English. The subtle influence of tradition is best seen at Oxford and Cambridge, where the English youth acquires a stability and refinement of character hardly equalled elsewhere. Most observers find the source in the constant contact of young men with ancient halls, sensible of the influence, still potent, of past masters and disciplined in the old well tried methods of thought, study, and conduct. Yet, the efficiency expert would tear down the old mouldy crumbling halls, erect modern hygienic buildings, throw out the useless readers,

abolish the ancient and superfluous Regius Professorship in medicine, reorganize the cumbersome government, abolish old ceremonies to save time, and generally ruin the whole splendid structure. American universities also are old enough to have traditions and American scholars cling to them firmly, but we are not so sure of their value. We permit changes and experiments, small and great, on slight provocation, and rejoice to see the survival of the good after periods of chaos. The great danger of traditions is scholasticism, but history shows that the taint of scholasticism survives reform and can only be reached by intelligent appeal to the morality of scholars.

Among the time honored traditions of universities are nomination of appointees by one's peers, and life tenure of office for established scholarship. The actual power of appointment may well rest in other hands. Here lies the mainspring of loyalty and morality. These standards assure that appointments will be made on merit, as judged by personality and a record of achievement. Without them advancement may be sought by salesmanship, and political and social influence, and made in accordance with the swings of fashion by anyone who happens to be in authority. In France, England and Germany the available candidates have passed through a long series of qualifications by which they advance step by step to the higher positions, a method which encourages consistent work, and eliminates the adventurer. In England where the method is followed rigidly, some men may be advanced on length of service without corresponding ability, but prominent British educators assert that the advantages even of this system far outweigh its faults. The demotion of a professor in Germany would be regarded as a calamity subject to searching investigation, and such an event has virtually been unknown. While age is an uncertain standard, retirement at sixty-five or seventy years is generally a wise provision.

While American universities generally aim at the highest standards there is a lack of the rigid barriers and traditional safeguards maintained in the older European

universities. It is not surprising therefore that there have been occasional violations of established precedent, which it is best to regard as incidental to our unsettled conditions, to the rapid growth of university faculties, and to the necessity of frequent changes. It is not wise to minimize their importance, because they lessen the loyalty and morality of scholars, and they tend to sharpen the political sense of young doctors who are entering a university career. Human nature may not change much, but conditions do. Forty years ago I never knew of any laboratory worker whose work was definitely influenced by political considerations, but today the younger men discuss with the utmost frankness the political significance of their researches, utterances and contacts. The responsibility for these changes is very great and unless they are checked American medical scholarship will suffer lasting harm. It is not difficult to trace these changes to unfortunate practices which have survived recent reforms or have even resulted from them.

If contracts made by one administration are overlooked by a succeeding administration, one must infer that precedent is not well established in that school.

If the leading members of a faculty are forced out for the benefit of the favorite healer of a high political official, one must conclude that the basis of such a university is very unstable.

If all the higher positions in a faculty are declared vacant in order to make way for a cherished reform, one must ask whether the end justifies the means. The violent dislocation of established teaching staffs is an exceedingly drastic measure which many a man with fine sensibilities would hesitate to advise or undertake. Even Maria Theresa hesitated at such a step.

If authority is given to one man to choose an entire new faculty on his own knowledge, aided by those whom he chooses informally to consult, the question immediately arises—Why depart so widely from safe precedent, and

why not divide the authority among those who must later accept official responsibility?

If the policies of university medical schools are wisely based on traditions and are safely determined only by responsible experts with long experience, is it not clear that interested laymen run great risk of doing harm when they undertake to direct or control these policies?

To our European colleagues these violations of university methods in America appear to be inexplicable. Many have assured me that they cannot exist in Germany, France or England, and they regard them as a grave danger to university prestige in America. Thus, if established principles are neglected, even in good hands, and in spite of good intentions, expediency beclouds judgment, opportunity outrides tradition, and ambitions replace ideals.

## III

The foregoing incidents lead directly to another paramount factor in American medical education, the influence of organized philanthropy.

Everyone recognizes that the great foundations have been directed with wisdom, mainly by scholars of high repute, and that their policies have been based on the investigations and opinions of experts in many fields. Probably no new American activity has received more thorough scrutiny and deliberation. The British Commission on Education has for centuries conducted studies on educational problems, but in America there was no such group of experts on whom to rely in the solution of new problems. In creating such a group the foundations have done not the least of their services. It is not surprising that the Foundations have been accessible to innovations, earnestly pressed by their proponents, but not fully understood or approved by the great body of scholars. The project of full-time clinical service is one of these innovations.

University men can offer no objection to the trial of this experiment, but they have regretted some of the conditions

under which the experiments have been conducted. We trust that the results of the trial will be viewed with scientific courage.

The central idea of providing young men with opportunities for medical study free from financial worry was excellent and was wisely met by offering substantial salaries for this purpose. It was an entirely different matter to prevent university professors from overcharging their patients and neglecting their duties, for which the proper remedy was dismissal or moral suasion. The error was made of attempting to accomplish both these worthy objects by the same remedy and it has led to serious changes in the whole organization of medical teaching, some of which are not working well.

The first major consequence was the super-clinic with its enormous budget, calling for large sums of money which many think could be used better in safer projects. The most urgent need of medical education was larger support for the medical sciences, to enable professors and their mature assistants to live properly on their salaries. It was soon found that one had to pay the market price for suitable heads of the clinical departments, and when salaries comparable to those of bank presidents were added to the lure of scientific opportunities, the scheme lost much of its idealistic color. The old fashioned laboratory man, never having sat at the seat of custom, did not begrudge the liberal pay of his more fortunate colleagues but he was startled by the assumption that competent chemists, bacteriologists and pathologists could be found to work under the clinical leader, and he became alarmed to find his own traditional field of work dwarfed by his expansive neighbor. Thus far the only feature of the super-clinic which has fully materialized is the budget.

The full-time system has placed a premium on research and a discount on clinical efficiency. The responsible heads of clinical departments should be masters of their subjects, but when young men who have merely performed

a creditable piece of research are given large clinical responsibilities they are compelled to learn their business at the expense of their patients. But clinical medicine can only be mastered by long years of hard experience. Thus one of the worst faults of the old proprietary school system was unconsciously reënacted. Recently more mature men have been chosen to head the clinical departments, but the choice has been determined mainly on achievements in research, and not on ability to deliver service of the highest type.

Hard times are now about to add their salutary complications and the immediate future of full time clinical service faces new trials. It is to be hoped that the effort to float the scheme in times of stress does not lead to further dwarfing of other activities. Certainly the plan should not be forced upon institutions, and the proponents would do well to confine the experiments to resources under their immediate control. Since the activities of the Foundations exert a profound effect upon medical education, university men look to them for the finest appreciation of the university spirit.

## IV

The university is a place for the collection of knowledge and it is an ancient tradition that for this purpose a great library is essential.

In the Dark Ages medicine was mainly concerned with disputes over ancient and recent texts. The art of printing let loose a flood of revisions, writings and debates, which reveal an outstanding characteristic of the medical mind. Today an enormous volume of literature of every description from a multitude of sources crowds the ancient manuscripts into secure vaults, and submerges the real progress of science. Surely a consuming fervor of debate animates the medical profession, perhaps above all others. Yet, there is a fascination about the world of letters, unrestrained by harsh facts, which appeals to everyone, and inclines one to excuse the Dark Ages for their scholasticism, and the modern age for its colossal libraries.

America has always indulged a feverish passion for collecting books, and we have emptied many a foreign stack and cellar to fill our shelves. The outstanding features of medical literature today are volume, diversity, repetition, classification, practicality, accessibility, efficiency, not unmixed with fine literary effort and finish, but brevity and directness are lost arts. Americans are the most voluminous readers and publishers in the world. The library of the New York Academy of Medicine receives annually 1965 journals of which 679 are American, representing all branches of medicine and its collateral sciences. We have many great medical libraries, none exceeding in scope, usefulness and value the splendid collection of this Academy.

Yet, the art of printing was not an unmixed blessing. In many fields it has become almost as difficult to get the truth from books as to go out and discover it anew from Nature. Tons of printed pages come like an ocean fog from innumerable society transactions, great numbers of papers compiled for trivial occasions, extemporaneous remarks from all classes of speakers, hastily prepared orations, interminable case reports, undigested note books, etc., none of which are allowed to die owing to the ever present stenographer, stenotype and pestiferous dictograph. The worst offender is the record breaking investigator in the medical sciences, who serves up an endless supply of scientific tidbits. There is a well known racial tendency to leave nothing unsaid, and an equally well known national habit of encyclopedic display of knowledge without thought, both of which crush the honest reader. The Swiss physiologist of the 18th century, von Haller, was an infant prodigy, who produced 13,000 scientific papers and gave our most esteemed branch of medical science an impulse from which it is still vibrating. This is a record, and our modern contenders must not attempt to break the record. On the contrary the physician should feel a sense of responsibility every time he takes up the pen, realizing that he is about to add permanently to the mass of literature. It is now generally appreciated that the

number of papers produced by an author is usually in inverse ratio to their value.

Yet, there are many gold nuggets in the sands. Scholarly text books, authoritative systems, erudite texts, and crisp announcements were never so numerous. World literature was never so easily accessible or so eagerly sought and the written word was never a greater power in the progress and continuity of medicine.

On another side, I would enter a plea for greater appreciation and use of the scholar with broad experience and wide erudition as an efficient source of knowledge. There is a subtle power in the spoken word always missing in print. If it were not so we should abandon teachers and use only books. A half hour with Sir Wm. Osler was worth a month in the Bodleian library. As a matter of fact the great bulk of effective knowledge in the world comes from conversation and deliberation with those who know. The value of such men in a university should be more formally recognized.

Research now occupies the centre of the stage in the program of most university medical schools. Human ingenuity has been strained and material resources taxed to elicit new facts about disease. The results are most impressive and in no other age has there been such a volume of new information about all phases of medical problems. One may perhaps also say that in no other period has available knowledge been so usefully applied, for much able effort has been directed to the dissemination of knowledge and its application at the bedside. A fine spirit of inquiry and investigation pervades the medical schools, hospitals, and societies, elevates the standards of practice and curbs destructive criticism.

It is necessary to distinguish between mere observation and research, and by so doing we at once exclude the great bulk of so-called original investigation. Interesting isolated case reports, peculiar variations in anatomical findings, improvements in chemical technics, isolated findings

of new chemical and physical variations in pathological processes, uninterpreted results of experiments, may educate the writer, but do not constitute investigation. True research involves the attack upon a definite problem, the setting up of an hypothesis, and the demonstration of the truth of the hypothesis by adequate methods, and with convincing evidence. The discovery of insulin is an example of real research and original investigation. One hastens to add that observation is the main means of discovery of medical problems and consecutive observation has in the past furnished the solution of many. It was almost the sole weapon of the old clinicians. Research in the literature was the main occupation of mediæval physicians who thumbed the medical canons for centuries without results, and it still remains a favorite pastime. The modern scholastic loves to rediscover old facts by new methods and claims that we are now engaged in quantitative estimations of the phenomena of disease. This dictum assumes that the facts are already known. There is a point in the course of most investigations where the aid of experiment is necessary, but pure experimental research on manmade problems is overdone and its results, unless closely controlled and applied, have been disappointing. This is the antithesis of the old scholasticism and shares its faults.

In recent decades the universities have lost some of their dominance in research, owing to the increasing complexity of problems and the necessity of providing men and materials on a large scale. Throughout the world there are many research institutions, private and governmental, which are contributing a very large share of medical progress and the conditions in many of them are rather more fortunate than in most universities. Some very important medical problems are now largely in the hands of industrial concerns which handle them with fine recognition of the university spirit. Yet, pure research tends to scholasticism, and industrial research has relations with commercialism, so that both these movements are regarded

with anxiety by most university men, who would prefer to see the universities retain a dominant position in medical research.

These few phases are mentioned in order to point out that knowledge makes progress in exceedingly varied and devious ways. The flower of research will not flourish in the highways and byways. Therefore any attempt to direct or coerce research according to the ideas of commissions and organizations is probably unsound. Complete freedom of thought and action are essential conditions, for it is generally the non-conformist who makes progress.

## V

The University is a place for the dissemination of knowledge, which is equally important with its collection. Teaching in all its phases is probably the most constructive of human activities, the most effective factor in binding individuals in the social state, and the chief agent in maintaining the continuity of knowledge from age to age. The facilities for medical teaching have had revolutionary advances in the last half century, and the results are excellent. Yet, the art of teaching remains the same as ever. Its essence consists in personal contact, the spoken word, a fitting personality, and the instinct of the helping hand. Here the university spirit finds some of its best expression. To cultivate the faculties of the immature mind, to give opportunity under direction and to see results, is to add something to the world which would not otherwise exist, and is the chief reward of the teacher. Medical history abounds in examples of the influence of the great teacher, extending often over several generations. Such men have been loyal friends of their pupils, and have never ceased to exert their influence to advance their associates in every proper way. They have had the ambition to produce men superior to themselves. Over against the helping hand is the idea of the big brother. Some teachers assert that they address themselves only to the best men in the class and neglect the others. Conscious of superiority, they clamp

down their own ideas and methods on the brilliant student, they see their own reflection in his success, which they are very apt to appropriate, they love the ease of working with capable minds, but they contribute little that would not otherwise exist. The big brother impulse has many ramifications in and out of university life, but it is contrary to the university spirit. It is a fortunate school that numbers in its staff many self-effacing, hard working, earnest men who take pride and pleasure in seeing creative work throughout the ranks of their students and whose departments are free from dogmatism, egotism, and self-assertion. Yet, one almost never sees a department head deliberately chosen for these rare qualities. The premium on brilliancy and so-called productivity generally singles out men of quite a different type.

The study of medicine has a very high cultural value, probably exceeding that of any other department of learning. The intrinsic value of a knowledge of medical science and clinical medicine is very great, and this is the reason why it is sought by thousands of young men and women quite apart from the earning capacity and privileges which the doctorate in medicine confers. Acquaintance with the structure and functions of the human body, of the causes, mode of origin, course and control of disease, discipline in scientific modes of thought, respect for authority, consciousness of one's own limitations, are some of the qualities which generally make a knowledge of medicine conspicuous in its possessor. Physicians, who do not practice medicine, have often exerted a powerful influence for good in public affairs, especially in Germany, and that influence is greatly needed with the growing complexity of the problems of modern life. Yet, modern university medical schools deny this knowledge to hundreds of applicants and thereby lose a vast opportunity to advance the standard of general intelligence and extend the influence of the university ideal. Compelling excuses are believed to exist in the difficulty of supplying adequate facilities of the best

type, but the responsibility can hardly be dismissed in this manner.

There are today 13,000 fully qualified applicants for medical instruction in this country, but only 7,000 places available. Thus, the institution designed to supply a need becomes the chief obstacle in the way of the satisfaction of that need. Descartes has said: "If there is any possible means of increasing the wisdom and ability of mankind, it must be sought in medicine."

Fortunately, the dissemination of medical knowledge does not end with the university, which rather naively admits that it only lays a foundation. Some medical educators aim to teach as little of practical nature as possible, in which ambition they are often remarkably successful. Postgraduate education looms too large for the present day university program, but the task is taken up by innumerable other agencies. Local, social and scientific, urban, interurban, county, state, national and international societies, journals and conferences form a vast and effective scheme for the interchange, dissemination, advancement and employment of medical knowledge. We may at least claim that in the workings of this scheme the influence of university men predominates.

## VI

Finally, we come to that fundamental question, the place of utility in the conception of the university. I have ventured to emphasize, perhaps, overemphasize, the idea of utility for man's needs as a guiding principle in the university program. This proposition may appear self-evident to many, but the history of medicine shows that it has been contested, and often overridden at many periods, and it lacks general acceptance at the present day. During the decay of medicine and the reign of the medical gospels in the Dark Ages, it was wholly discarded and medical knowledge was sought in parchments and for its own sake. At this very time the influence which kept med-

icine alive was the enormous and everpresent task of caring for the sick. The growth and achievements of many knightly orders consecrated to the relief of the sick throw a splendid light over those melancholy centuries. For a very long period hospital construction, nursing, and hygiene made remarkable progress, while medical science stood still. For a longer period the methods of teaching medicine were inherited ends in themselves, so cumbersome in the exclusive use of Latin, as to thwart the object that should have been in view. In the Renaissance it must be suspected that the rivalry between competing universities, some of which drew great numbers of paying students, perpetuated dogma, artificiality and institutional reputations, over utility and progress. In the seventeenth century the large rewards obtained by many successful practitioners made dress, manner and reputation the chief ends of the medical man.

We may amuse ourselves reflecting over the woeful deficiencies of former generations, but it is not difficult to detect traces of these same faults in present day institutions, and the fact that they are mostly due to neglect of a sound principle of utility. It is a widespread doctrine that science in a medical school should be pursued for science's sake, and hence we see the fundamental sciences taught mostly by men without medical training or interests, who often deliberately neglect the medical aspects of their subject. Most of these men realize that they would be better and happier in their work if they had had a medical education. Who can understand the liver if he has not seen it in acute yellow atrophy? Who can know the cell if he has not followed its cancerous riot? There was a time when it was difficult to secure physicians competent to teach the preclinical medical sciences, but that time should have passed.

The great expansion of experimental medicine often leading to the pursuit of random topics and questions distantly related to medicine, may be a necessary phase of the growth of the scientific spirit, but it distracts atten-

tion and resources from the real, urgent, and often solvable problems of medicine.

The close affiliation or union of general and special hospitals with university medical schools and the introduction of the university spirit into the life of hospitals is the most significant advance made in medical organization in this century. It mitigates the rigid scientific spirit, directs it to the practical problems presented by sick patients, and encourages the study of these problems under the best conditions. There is good reason to believe that the progress of clinical medicine in the immediate future will depend largely on the more intelligent interpretation and use of data secured in the laboratory. The laboratory trained clinician has many advantages, but it is difficult to shine both at the bedside and in the laboratory and many fear that pure clinical research and the art of medicine are unwisely neglected by the praiseworthy attempt to cover both fields. Unless a safe principle of utility is adopted, the laboratory clinician may become absorbed in the rediscovery of old facts by new methods, and the easy pursuit of interesting but secondary phenomena of disease.

The universe is full of interesting facts, as numerous as sand grains on the ocean beach, but not all are important, and the wise investigator and physician imbued with a sound university spirit, will choose carefully and avoid being lost in the sea of knowledge. All these tendencies and many others form the modern scholasticism. We have seen its deadening effect on the medicine of the past, and we should defend against it by intelligent adherence to the principle of utility. "All knowledge attains its ethical value and its human significance only by the human sense with which it is employed" (Nothnagel).

Modern university medical schools, especially the American, are singularly slow to realize the enormous growth of many medical specialties, the opportunities for service, the dependence of progress on experience, and the necessity of providing adequate facilities for such normal and

inevitable growth. The institute idea seems to be new to many who find themselves directing university development. Yet, institutes of pharmacology began to appear in the 17th Century, and institutes have figured prominently in the growth of many branches of medicine ever since. They are particularly necessary at the present stage of medical progress, especially as viewed from the utilitarian standard.

Yet two New York Schools have recently absorbed famous institutes of obstetrics, founded by men of vision, with long and excellent records in education and service. They are now merged with gynecology, in accordance with a policy recently adopted by many schools. Only experience can determine whether obstetrics will profit by these changes and whether these institutions will thereby be able to improve on their past records. In the meantime many regret the passing of these old-time ornaments of New York medicine, and they hope that New York has not lost the opportunity of duplicating some of the famous maternity hospitals of the world.

Not one of the great university medical schools has taken a vigorous initiative in the modern movement for the control of tuberculosis, or cancer, by the creation of institutes for service and research in these paramount interests of humanity. All the medical schools do a little orthopedic surgery, but the progress of orthopedics was long since consigned to special hospitals and institutes devoted exclusively to this field. The same situation holds in pediatrics and contagious diseases.

Dental institutes are making progress slowly but surely, but legal medicine knocks in vain at the university back door. On the other hand, the McCormick Institute for Infectious Diseases at Chicago, the School of Hygiene at Hopkins, the Institute of Human Relations at Yale, and the department of psychiatry of the New York Hospital-Cornell Association, are fine expressions of the institute idea, and ominous signs of the size to which the arms of

university medicine must grow if it is to keep pace with progress. Yet, in general, it must be admitted that the growth of modern medicine in recognition of the principle of utility, the demand for service and the dependence of progress on service, have outstripped the vision of the organizers of university medical schools. Unless these demands are met, the real progress of medicine will pass out of the hands of the universities, as it has already partly done in some fields. These schools will then be free to devote their vast resources to the pursuit of medical science as a branch of biology and to experiments in medical education. This is the essence of scholasticism.

The University medical school has never known quite how to handle the question of the extramural activities of its scholars. In general it discountenances such activities without much concern about their great educational value. It leaves the busy world to take care of itself. It feels little responsibility for the way medicine is practiced.

Into this breach medical men with the university spirit have thrown themselves with energy and intelligence. The results have been excellent because they adopted the principle of utility. Organizations have been formed devoted to the advance and dissemination of the higher branches of medical knowledge, to postgraduate instruction, to the collection of great libraries, to the organization and elevation of hospitals, to the interests of the nursing profession, to problems of public hygiene, to the policies of governments in medical affairs, and in fact to all the practical relations of medicine in social life. These bodies have long been a powerful influence for good in their communities, and they have generally been animated by a fine conception of the university spirit. Such a body is the Royal College of Physicians of England, originated in 1518 and gradually reaching its present form and influence after centuries of service in the field of organized Medicine. The Royal Society of London was founded in 1660. Similar societies followed in Naples, Dublin, Berlin and Paris, all devoted to the advancement of science and its practical applica-

tions. Today every great city supports one or more societies engaged in the extension of university medicine in its community.

There was thus ancient precedent for the formation of the New York Academy of Medicine in 1847, but there are few if any examples of the remarkable growth of its activities and of the influence it exerts in its community. Its great library elevates the standard of medical knowledge in this and other neighboring cities. A long list of affiliated societies prosper under its patronage. With rare vision, it has discerned and embraced many opportunities to advance and extend the application of medical knowledge. It is concerned with the standards of medical practice and morals, censors medical news, protects the public against errors and abuses, coöperates with medical schools, influences legislation, and adopting the principle of utility, interests itself in all that interests medicine and the public. It is one of the most efficient of all agencies in extending the influence of medicine into a broad and extremely practical field.

And now, what does this review of the history and present position of the university reveal? Does it not show that the university has been at nearly all times the mainspring of intellectual and scientific progress? It may have declined with the decay of nations but it has always taken the first step toward the revival of learning and the advance of knowledge. Hence it has survived religions, is more powerful than government, and has a better record than the Church. In the university medicine has always occupied a commanding position because it deals with a primal necessity, self-preservation. At times medicine has been almost the sole source of inspiration toward learning and intellectual effort. Medicine directed by the university idea has accomplished great things in the control of disease and the revelation of man's physical nature, but its main task still lies before it. We may not wisely conceive of a world without physical evil. It would hardly be human. There is no such danger. Yet there are voices ac-

claiming the arrival of the day when medicine, having virtually conquered the old diseases, may now pass on to birth control, eugenics, and the superman—dreams, possible to him who ignores the stern realities of the sick room and the dead house. Preventive medicine has done much, but the era of clinical efficiency in curative medicine is still to dawn.

The world looks hopefully to the university and its medical school and to educated physicians to go forward with the task of controlling disease and carry it as far as may be. We shall therefore jealously guard the best traditions of the university ideal. We shall see to it that attested medical knowledge is carried into every human activity and relation where it may be of service in the control of disease and the elevation of the standard of intelligence, and by coöperative intellectual and moral endeavor, we hope to justify mankind's great adventure in altruistic effort, the university.

## PURE AIR AND CLEAN STREETS EXHIBIT

Lack of proper methods of street cleansing and of the removal of waste detracts from the appearance of the city and invites negligence on the part of the public. It carries in its trend more important consequences than unsightliness and the pollution of our bay waters. The open garbage can is a feeding place for insects and rodents, and thereby contributes indirectly to the transmission of many diseases, of which flies, vermin and rats are carriers. Improper sweeping results in filling the air with dust, as does the practice of dumping ash cans into open carts. Other deleterious elements in the air we breathe in the city are: the carbon monoxide from the exhaust of automobiles and the smoke and soot which come from the chimneys of buildings and from stacks of boats plying in the city waters, as well as the mineral dust that comes from building operations, the tearing up of streets, the cleaning of buildings by sand blasting, and other similar sources.

The New York Meteorological Bureau in New York City measures daily the amount of dust suspended in the air, and it was found that over the Central Park Area, which is probably one of the most favored areas in the city, the amount of dust and soot suspended averaged 3.97 tons per cubic mile of air, during 1930. On moist days this suspension creates a pall which deprives the city of much sunlight and, particularly, of ultra-violet rays. Aside from the injury to our eyes and to air passages which the impurities of the air create, the amount of economic loss caused, directly or indirectly, is considerable. A great deal of coal and oil is being wasted by improper combustion, and the destruction of fabrics and household effects runs into hundreds of millions annually, according to the estimates made. As has been well said, excessive smoke is not a necessity but a luxury of laziness and indifference.

It is not only for the purpose of impressing on the public mind the menace to health of impure air and dirty streets that an exhibit will be held at the New York Academy of Medicine, under the joint auspices of the Academy Committee on Public Health Relations and the Committee of Twenty on Outdoor Cleanliness. It is being arranged primarily as an educational measure to stress the possibility of preventing this nuisance as well as health hazard. The exhibit, which will be open to the public, will begin January 12th, 1932, and continue for eight days. It will consist not only of graphs, charts, photographs, as well as various scientific instruments of precision used in measuring contamination, but principally of models of modern street cleaning apparatus, stoking devices, ventilating machines, and moving pictures depicting modern methods. In this endeavor the coöperation of the city, state and federal authorities is being enlisted, as well as that of scientific organizations and of the manufacturers of proper equipment.

## RECENT ACCESSIONS TO THE LIBRARY

Alexander, F. and Staub, H. The criminal, the judge, and the public; a psychological analysis.
N. Y., Macmillan, 1931, 238 p.

Barral, E. V. and Barral, P. Précis d'analyse biologique clinique; sang. 2. éd.
Paris, Baillière, 1931, 427 p.

Besredka, A. Antivirusthérapie.
Paris, Masson, 1930, 429 p.

von Borosini, A. Verjüngungskunst von Zarathustra bis Steinach. 4. Aufl.
Dresden, Pahl, 1931, 82 p.

Bradley, J. H. Parade of the living; a history of life on earth.
London, Routledge, 1931, 276 p.

Brandt, W. Grundzüge einer Konstitutions-Anatomie.
Berlin, Springer, 1931, 382 p.

Campbell, A. M. The Black Death and men of learning.
N. Y., Columbia Univ. Press, 1931, 210 p.

Carnot, P. Clinique médicale de l'Hôtel-Dieu de Paris.
Paris, Baillière, 1930, 343 p.

Chaoul, H. and Adam, A. Die Schleimhaut des Verdauungskanals im Röntgenbild.
Berlin, Urban, 1931, 229 p.

Chavanon, P. La diphtérie; traitement clinique et immunisation. 3. éd.
Paris, Vigné, [1931], 114 p.

Chayer, M. E. School nursing.
N. Y., Putnam, 1931, 292 p.

Chirurgische und konservative Kosmetik des Gesichtes. Hrsg. von Leander Pohl.
Berlin, Urban, 1931, 383 p.

Collins, J. The doctor looks at life and death.
N. Y., Farrar, [1931], 315 p.

Constas, N. P. Contribution à l'étude du traitement chirurgical des tumeurs mixtes de la parotide.
Paris, Arnette, 1930, 119 p.

Davis, M. M., jr. Paying your sickness bills.
Chic., Univ. of Chic. Press, [1931], 276 p.

Dopter, C. H. A. and Sacquépée, E. Précis de bactériologie. 4. éd.
Paris, Baillière, 1931, 618 p.

Dufau, E. and Toraude, L. G. Notions pratiques de pharmacie. 2. éd.
Paris, Vigot, 1930, 531 p.

Fifield, L. R. Minor surgery. 2. ed.
N. Y., Hoeber, 1931, 439 p.

Foxe, A. N. Auscultation of the abdomen; completion of the method of Laennec. Typewritten.
N. Y., [By the author], 1931, 514 num. l.

Gebert, A. Grundriss der Arzneimittellehre und Arzneimittelverordnung für Zahnärzte.
Berlin, Berlinische Verlagsanstalt, 1931, 167 p.

Grundriss der gesamten praktischen Medizin. 2. Aufl., hrsg. von E. Müller und A. Bittorf.
Berlin, Springer, 1931, 2 v.

Handbuch der vergleichenden Anatomie der Wirbeltiere.
Berlin, Urban, 1931, v. 1.

Handovsky, H. Pharmakologie in ihren modernen Problemstellungen.
Dresden, Steinkopff, 1931, 224 p.

Heim, L. and Skell, F. Anleitung zur Mikrophotographie.
Jena, Fischer, 1931, 92 p.

Hering, E. Wissenschaftliche Abhandlungen.
Leipzig, Thieme, 1931, 2 v.

Hetsch, H. K. W. Mikrobiologie und Immunitätslehre.
Berlin, Urban, 1931, 443 p.

Higoumenakis, G. Le bouton d'Orient (leishmaniose cutanée) et son traitement moderne.
Paris, Masson, 1930, 149 p.

Holenstein, P. E. Das psycho-physiologische Problem.
Paderborn, Schöningh, 1931, 157 p.

Izzo, A. Guerra chimica e difesa antigas.
Milano, Hoepli, 1931, 280 p.

Katase, A. Der Einfluss der Ernährung auf die Konstitution des Organismus.
Berlin, Urban, 1931, 162 p.

Knick, A. Ohren-, Nasen-, Rachen- u. Kehlkopfkrankheiten. 6. Aufl.
Leipzig, Verband der Aerzte Deutschlands, 1931, 294 p.

Koch, W. Psychologische Farbenlehre.
Halle a. S., Marhold, 1931, 325 p.

Köhler, A. Grenzen des Normalen und Anfänge des Pathologischen im Röntgenbilde. 6. Aufl.
Leipzig, Thieme, 1931, 672 p.

Krummnow, F. Lehrbuch der Kronen-, Brücken- und keramischen Technik. 5. Aufl.
Berlin, Dentistischer Verlag, 1931, 382 p.

Lamond, J. Arthur Conan Doyle, a memoir.
London, Murray, [1931], 310 p.

Lampert, H. Die physikalische Seite des Blutgerinnungsproblems und ihre praktische Bedeutung.
Leipzig, Thieme, 1931, 127 p.

Leroy, O. A French bibliography of Sir Thomas Browne.
London, Harrap, 1931, 97 p.

Liepmann, W. G. Der geburtshilfliche Phantomkurs. 2. Aufl.
Berlin, Urban, 1931, 316 p.

Lipschitz, M. Führer durch strittige Fragen der täglichen Praxis.
Berlin, Berlinische Verlagsanstalt, 1931, 124 p.

Lumière, A. Tuberculose; contagion, hérédité. 2. éd.
Lyon, Desvigne, 1931, 424 p.

Martin, A. J. Cas cliniques de prothèse.
Paris, Semaine Dentaire, 1930, 191 p.

Martinotti, G. I sintomi radiologici locali degli stadi di sviluppo dell'ulcera duodenale.
Torino, Minerva, 1931, 159 p.

Matas birthday volume, a collection of surgical essays.
N. Y., Hoeber, 1931, 396 p.

Mattisson, K. Das Magengeschwür.
Berlin, Urban, 1931, 344 p.

Meller, J. Augenärztliche Eingriffe. 3. Aufl.
Wien, Springer, 1931, 352 p.

Monod, R. A. J. L'anesthésie en pratique chirurgicale.
Paris, Masson, 1931, 154 p.

Morax, V. Précis d'ophtalmologie. 4. éd.
Paris, Masson, 1931, 896 p.

Morgenthaler, W. Die Pflege der Gemüts- und Geisteskranken. 2. Aufl.
Bern, Huber, [1931], 286 p.

Mühlmann, M. S. Vegetatives Nervensystem und Geschwulstbildung.
Jena, Fischer, 1931, 102 p.

Münzesheimer, F. Die Wurzelbehandlung mit Hochfrequenzstrom.
Berlin, Berlinische Verlagsanstalt, 1931, 112 p.

Ortner, N. Körperschmerzen und ihre Differentialdiagnostik. 4. Aufl.
Berlin, Urban, 1931, 726 p.

Peckham, R. M. Squints and heterophorias.
Rochester, [Lyman], 1931, v. 1.

Plessier, P. Traitement du bec-de-lièvre unilatéral.
Paris, Masson, 1931, 145 p.

Poller, A. Das Pollersche Verfahren zum Abformen an Lebenden und Toten sowie an Gegenständen.
Berlin, Urban, 1931, 216 p.

Popoff, M. Die Zellstimulation.
Berlin, Parey, 1931, 375 p.

Pringsheim, H. Die Polysaccharide. 3. Aufl.
Berlin, Springer, 1931, 393 p.

Protti, G. L'emoinnesto intramuscolare e le radiazioni vitali nella vecchiaia e nell'esaurimento.
Milano, Hoepli, 1931, 140 p.

Ray, K. W. Metallurgy for dental students.
Phil., Blakiston, [1931], 299 p.

Redaelli, P. Tecnica micologica medica.
Bologna, Cappelli, [1931?], 227 p.

Reder, A. Madaus Codex biologischer Heilmittel.
Radebeul/Dresden, Madaus, [1931], 240 p.

Rehder, H. Die Sondenbehandlung chronischer Magen- und Zwölffingerdarmgeschwüre.
Leipzig, Verband der Aerzte Deutschlands, 1931, 72 p.

Remund, M. H. Gerichtlich-medizinische Erfahrungen und Probleme bei Automobilunfällen.
Basel, Schwabe, 1931, 199 p.

Riesenfeld, E. H. Svante Arrhenius.
Leipzig, Akademische Verlagsgesellschaft, 1931, 110 p.

Robinson, V. The story of medicine.
N. Y., Boni, [1931], 527 p.

Rodiet, A. and Heuyer, G. La folie au XXe siècle; étude médico-sociale.
Paris, Masson, 1931, 359 p.

Rudaux, P. and Montlaur, H. Dépistage de la syphilis en pratique obstétricale et prophylaxie de la syphilis héréditaire.
Paris, Masson, 1931, 146 p.

Sanarelli, G. L'hérédité et la contagion dans la tuberculose.
Paris, Payot, 1931, 221 p.

Scalone, I. La cancerizzazione dell'ulcera gastrica.
Milano, Hoepli, 1931, 133 p.

Scalone, I. La chirurgia della innervazione periferica del simpatico.
Milano, Hoepli, 1931, 254 p.

Scheler, M. F. Wesen und Formen der Sympathie. 3. Aufl.
Bonn, Cohen, 1931, 311 p.

Schoenbeck, F. Kurzer Leitfaden der zahnärztlichen Materialkunde. 2. Aufl.
Berlin, Meusser, 1931, 156 p.

Schultz-Hencke, H. Schicksal und Neurose.
Jena, Fischer, 1931, 156 p.

Seifert, E. Lehrbuch der Chirurgie des Kopfes und Halses für Zahnärzte. 2. Aufl.
München, Lehmann, 1931, 238 p.

Senn, E. Theodor Bilharz.
Stuttgart, Ausland und Heimat Verlags-Aktiengesellschaft, 1931, 76 p.

Sutton, R. L. Diseases of the skin. 8. ed.
St. Louis, Mosby, 1931, 1352 p.

Thayer, W. S. Osler and other papers.
Balt., Johns Hopkins Press, 1931, 386 p.

Tixier, L. Les enfants syphilitiques.
Paris, L'Expansion Scientifique Française, [1931], 344 p.

Trautmann, A. and Fiebiger, J. Lehrbuch der Histologie und vergleichenden mikroskopischen Anatomie der Haussäugetiere. 6. Aufl.
Berlin, Parey, 1931, 394 p.

Walkhoff, O. Lehrbuch der konservierenden Zahnheilkunde. 3. Aufl.
Berlin, Meusser, 1931, 391 p.

Walschied, A. J. Abdomino-pelvic diagnosis in women.
St. Louis, Mosby, 1931, 1000 p.

Wechsler, I. S. A text-book of clinical neurology. 2. ed.
Phil., Saunders, 1931, 759 p.

White House Conference on Child Health and Protection. Section I. Medical Service. Committee on Medical Care for Children. Health protection for the preschool child. Report.
N. Y., Century, [1931], 275 p.

Williams, R. J. An introduction to biochemistry.
N. Y., Van Nostrand, 1931, 501 p.

Winter, L. A textbook of exodontia. 2. ed.
St. Louis, Mosby, 1931, 455 p.

---

## PROCEEDINGS OF ACADEMY MEETINGS

### DECEMBER

STATED MEETINGS

Thursday Evening, December 3, at 8:30 o'clock

ORDER

I. EXECUTIVE SESSION
Election of Officers
Election of Fellows

II. PAPERS OF THE EVENING
Cutaneous manifestations of systemic disease, Udo J. Wile, Professor of Dermatology and Syphilology, University of Michigan
Discussion, Medical aspects, William R. Williams; Dermatological aspects, Howard Fox; Serological aspects, Arthur F. Coca

THE HARVEY SOCIETY
In Affiliation with
THE NEW YORK ACADEMY OF MEDICINE
Thursday Evening, December 17, at 8:30 o'clock
THE THIRD HARVEY LECTURE
"INFECTION AND RESISTANCE TO THE BLOOD INHABITING PROTOZOA"
W. H. TALIAFERRO
Chicago

This lecture takes the place of the second Stated Meeting of the Academy for December.

JAMES W. JOBLING, President, Harvey Society
DAYTON J. EDWARDS, Secretary, Harvey Society

## Section Meetings

### Section of Dermatology and Syphilology

Tuesday Evening, December 1, at 8:30 o'clock

ORDER

I. Reading of the Minutes

II. Presentation of Cases

a. Cases from the New York University and Bellevue Clinic

b. Miscellaneous cases

III. General Discussion

IV. Executive Session

### Section of Surgery

Friday Evening, December 4, at 8:30 o'clock

ORDER

I. Reading of the Minutes

II. Presentation of Cases

a. 1. A case of duodenal ulcer penetrating pancreas and liver; operation, duodenal fistula, and cure

2. A case of duodenal ulcer penetrating three times

Lester Breidenbach

b. 1. A case of traumatic rupture of the common bile-duct

2. A case of compound depressed fracture of the skull

Kenneth M. Lewis

c. Cases of postoperative ileus treated by enterostomy, Frank J. McGowan, Jr.

III. Paper of the Evening

The treatment of ileus as indicated by clinical experience and experimental studies, John J. Morton, Professor of Surgery, University of Rochester (by invitation)

IV. Discussion

John A. Hartwell, Joshua E. Sweet, Frederick T. van Beuren, Seward Erdman

V. Executive Session

### Section of Neurology and Psychiatry

Tuesday Evening, December 8, at 8:30 o'clock

ORDER

I. Reading of the Minutes

II. Case Presentation

Chronic hypertrophic interstitial neuritis (Dejerine-Sottas). From the Neurological Institute, Henry Alsop Riley

III. Paper of the Evening

The autonomic nervous system and its chemical mediators, Walter B. Cannon, Harvard Medical School (by invitation)

IV. Discussion

Horatio B. Williams, Professor of Physiology, Columbia University, Smith Ely Jelliffe

V. Executive Session

Second report of Advisory Committee on requirements for Fellowship
(A full discussion of this important report is desired)

SECTION OF PEDIATRICS

Thursday Evening, December 10, at 8:30 o'clock

ORDER

PAPERS OF THE EVENING

a. Special pediatric bearings of encephalography, Bronson Crothers (by invitation)

b. New trends in encephalography, Leo M. Davidoff (by invitation), Cornelius G. Dyke (by invitation)

Discussion, Benjamin Kramer

SECTION OF GENITO-URINARY SURGERY

Wednesday Evening, December 16, at 8:30 o'clock

ORDER

I. READING OF THE MINUTES

II. PRESENTATION OF CASES

The value of intravenous pyelography in the management of ureteral calculi; based on a study of 45 cases (lantern slides), Ralph L. Dourmashkin

III. PAPER OF THE EVENING

Neurosurgery in the treatment of diseases of the urinary bladder, James R. Learmonth, Mayo Clinic (by invitation)

Discussion opened by Byron Stookey, Nathaniel P. Rathbun

IV. GENERAL DISCUSSION

SECTION OF ORTHOPEDIC SURGERY

Friday Evening, December 18, at 8:30 o'clock

ORDER

I. READING OF THE MINUTES

II. PAPER OF THE EVENING

Maggots and their use in the treatment of chronic osteomyelitis, Joseph Buchman (by invitation), John E. Blair, Ph.D. (by invitation)

III. DISCUSSION OPENED BY George E. Bennett, Baltimore (by invitation), A. M. Rechtman, Philadelphia (by invitation), M. M. Pomeranz

IV. EXECUTIVE SESSION

SECTION OF MEDICINE

Friday Evening, December 18, at 8:30 o'clock
(Please note change of date)

ORDER

PAPERS OF THE EVENING

Neoplasms of the lungs and bronchi

a. Bronchoscopic features, Chevalier Jackson, Philadelphia

b. Clinical features, Harry Wessler

c. Pathologic basis of symptomatology as shown by roentgenograms and specimens, Coleman B. Rabin (by invitation)

Discussion, J. Burns Amberson, Jr., Adrian V. S. Lambert, Lloyd F. Craver

SECTION OF OPHTHALMOLOGY

Monday Evening, December 21, at 8:00 o'clock

(Please note change of hour)

ORDER

I. READING OF THE MINUTES

II. A case of abscess of cornea following cataract extraction, Clyde E. McDannald

III. Two cases of exophthalmos as an early manifestation of leukaemia, Algernon B. Reese

Discussion, Loren Guy (by invitation)

IV. Large implantation cyst of the iris treated by aspiration and injection of iodine, Ellice M. Alger

V. Presentation of a case with von Recklinghausen disease (with microscopic slides), Arthur Knapp (by invitation)

VI. The ophthalmologist and the lighting problems of his patients, Walter B. Lancaster, Boston (by invitation)

VII. The ophthalmologist and the illuminating engineer. A few critical remarks, Le Grand H. Hardy

Discussion, Professor Selig Hecht (by invitation)

VIII. EXECUTIVE SESSION

To vote on report of Committee on Fellowship requirements

SECTION OF OBSTETRICS AND GYNECOLOGY

Tuesday Evening, December 22, at 8:30 o'clock

ORDER

I. READING OF THE MINUTES

II. PRESENTATION OF CASES

a. Value of the x-ray as an aid to diagnosis of cyanosis in the new born. Report of 5 cases, E. H. Dennen

b. Case of pernicious vomiting with death, Harbeck Halsted

III. PAPER OF THE EVENING

The psychological duty of the obstetrician, Edmund B. Piper, Philadelphia (by invitation)

IV. GENERAL DISCUSSION

V. EXECUTIVE SESSION

SECTION OF OTO-LARYNGOLOGY

Wednesday Evening, December 23, at 8:30 o'clock

ORDER

I. READING OF THE MINUTES

II. PAPERS OF THE EVENING

a. End results in sinus surgery, E. Ross Faulkner

Discussion, Robert E. Buckley

b. A study of the incidence of nasal sinus disease in 386 cases of chronic arthritis with special reference to the cases in which it

acted as a silent focus of infection, S. Fineman, R. G. Snyder, C. H. Traeger (by invitation)
Discussion, Lee M. Hurd, Blake F. Donaldson

III. Executive Session
Election of Officers and Advisory Committee
For Chairman—Charles J. Imperatori
For Secretary—Marvin F. Jones
For members of Advisory Committee—
John R. Page (1 year)
Richard T. Atkins (2 years)
Westley M. Hunt (3 years)
Clarence H. Smith (4 years)
David H. Jones (5 years)

Note:—The day most available for section meetings is the third Wednesday of the month.

### Affiliated Societies

### New York Pathological Society
In Affiliation with
The New York Academy of Medicine
Thursday Evening, December 10, at 8:30 o'clock
(Please note change of date)

ORDER

I. Presentation of Cases
a. Aortico-ventricular fistula with engrafted acute endocarditis, Mendel Jacobi, Abraham Heinrich
b. Sarcoma-like tumor of pleura, Mendel Jacobi, Herman Bolker
c. Mycotic aneurysms at the base of the aorta in an instance of subacute bacterial endocarditis, David Perla, Sam Rosen (by invitation)

II. Papers of the Evening
a. The histological distribution of lipoids in various lesions of the kidney: a preliminary report, Irving Graef, Henry Horn (by invitation)
b. Endemic amebic dysentery in residents of New York City, Paul Klemperer

III. Executive Session

### New York Meeting
of the
Society for Experimental Biology and Medicine
Under the auspices of
The New York Academy of Medicine
Wednesday, December 16, 1931, at 8:15 P. M.

I. Influence of Secretions of the Upper Respiratory Tract on Tissue Resistance, F. M. Hanger
II. Occurrence of Fatty Livers in Rats Fed a Diet Containing Dried, Whole Liver, N. R. Blatherwick, E. M. Medlar, P. J. Bradshaw, A. L. Post and S. D. Sawyer
III. Immunological Differences Between a Strain of Monkey Virus and

Human Poliomyelitis Virus, E. R. Weyer (introduced by W. H. Park)

IV. "Slow-Motion" Cinematographs of the Contraction of Single Muscle Cells, C. M. Goss (introduced by S. R. Detwiler)

V. Influence of Anesthesia upon Pancreatic Function, T. F. Zucker, P. G. Newburger and B. N. Berg

VI. Therapeutic Value of Pneumococcus Type VII (Cooper) Serum, J. G. M. Bullowa

VII. Differences in Bactericidal Power of Blood Within an Inbred Strain of Rats, M. R. Irwin and T. P. Hughes

NOTICE TO MEMBERS

It is desired that the program be printed in full in the Academy folder. To this end manuscripts should be in the Secretary's office by the first of the month.

THE NEW YORK ROENTGEN SOCIETY
In Affiliation with
THE NEW YORK ACADEMY OF MEDICINE
Monday Evening, December 21, at 8:30 o'clock

ORDER

I. Demonstration of interesting cases and roentgenograms
A CLINICAL MEETING

II. EXECUTIVE SESSION

---

## FELLOWS ELECTED JANUARY 7, 1932

Emanuel Appelbaum .....50 West 96 Street
Ray McCune Bowles.....1 Nevins Street, Brooklyn
Wade H. Brown.....Rockefeller Institute
Thomas Francis, Jr.....Rockefeller Institute
Donald Gregg .....Wellesley, Mass.
Karl Landsteiner .....Rockefeller Institute
Phoebus A. Levene.....Rockefeller Institute
George M. Lewis .....200 West 59 Street
Philip D. McMaster.....Rockefeller Institute
Louise H. Meeker.....1245 Post Road, Scarsdale, N. Y.
Peter K. Olitsky.....Rockefeller Institute
Thomas Parran, Jr. .....Loudonville, N. Y.
Cornelius P. Rhoads .....Rockefeller Institute
Adele E. Sheplar.....282 West 4 Street
C. Jonathan Slocum .....Beacon, N. Y.
E. Myles Standish .....Hartford, Conn.
Jerome P. Webster .....Bard Hall, 50 Haven Avenue
William Charles White.....2139 Wyoming Avenue, Washington, D. C.

AND FOR ASSOCIATE FELLOWSHIP:

Stanley R. Benedict, Ph.D. .....477 First Avenue
John H. Northrup, Ph.D.....Rockefeller Institute, Princeton, N. J.
W. J. V. Osterhout, Ph.D.....Rockefeller Institute
Donald D. Van Slyke, Ph.D.....Rockefeller Institute

## DEATHS OF FELLOWS OF THE ACADEMY

CARTER STANARD COLE, M.D., 204 West 55 Street, New York City; graduated in medicine from the University of Virginia, Charlottesville, Va., in 1887; elected a Fellow of the Academy October 1, 1891; died, December 29, 1931. Dr. Cole was a Fellow of the American Medical Association, a member of the County and State Medical Societies, a member of the Alumni Association of New York Hospital and a member of the Alumni Association of City Hospital.

JAMES RIDDLE GOFFE, M.D., Bronxville, N. Y.; graduated in medicine from Bellevue Hospital Medical College, in 1881; elected a Fellow of the Academy February 3, 1887; died, December 24, 1931. Dr. Goffe was a Fellow of the American Medical Association, a Fellow of the American College of Surgeons, a member of the County and State Medical Societies, and a member of the American Gynecological Society. Dr. Goffe was at one time President of the American Gynecological Society and was President of the Seventh International Congress of Obstetricians and Gynecologists.

RAY ROBINSON LOSEY, M.D., 30 East 40 Street, New York City; graduated in medicine from the University of Nebraska, Lincoln, Neb., in 1918; elected a Fellow of the Academy April 1, 1926; died, January 1, 1932. Dr. Losey was a Fellow of the American Medical Association, a member of the County and State Medical Societies, Senior Assistant Surgeon to the New York Eye and Ear Infirmary, Ophthalmologist to the Broad Street Hospital, Midtown and Community Hospitals.

CHARLES AUGUSTE WILSON-PREVOST, M.D., 55 Avenue du Bois de Boulogne, Paris, France; graduated in medicine from The Faculty of Medicine of Paris, in 1897; elected a Fellow of the Academy November 5, 1914; died, December 19, 1931. Dr. Wilson-Prevost practiced in New York for a quarter of a century and once was a surgeon at the Post-Graduate Hospital.